## Dielectric properties of silver nanoparticles coated with silica shells of different thicknesses

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## **Supporting Information**



Figure 1. Wettability test in water/toluene for the  $Ag@SiO_2$  (left) and that of hydrophobized with silane reagent (right). The hydrophobized particles are transferred in organic phase.



**Figure 2.** Solid-state <sup>29</sup>Si CP-MAS NMR spectrum of silver nanoparticles coated with silica shell and surface functionalized with octyl chains showing the chemical shift for the silicon nucleus of the surface-bound alkyl chains at  $\delta = 13$  ppm.



Figure 3. SEM image of Ag@SiO<sub>2</sub> (6.6 nm) powder in pressed pellet. The sample was measured in high vacuum mode using 3 kV and a TLD detector.



Figure 4. SEM image of Ag@SiO2 (6.6 nm) powder in pressed pellet. The sample was measured in low vacuum mode using 7 kV and a LVD detector.



Figure 5. SEM image of Ag@SiO2 (6.6 nm) powder in pressed pellet. The sample was measured in low vacuum mode using 7 kV and a LVD detector.